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(54) Title: **FILLED POLYMER COMPOSITE AND SYNTHETIC BUILDING MATERIAL COMPOSITIONS**

(57) Abstract: The invention relates to composite compositions having a matrix of polymer networks and dispersed phases of particulate or fibrous materials. The polymer matrix contains a polyurethane network formed by the reaction of a poly- or di-isocyanate and one or more saturated polyether or polyester polyols, and an optional polyisocyanurate network formed by the reaction of optionally added water and isocyanate. The matrix is filled with a particulate phase, which can be selected from one or more of a variety of components, such as fly ash particles, axially oriented fibers, fabrics, chopped random fibers, mineral fibers, ground waste glass, granite dust, or other solid waste materials. The addition of water can also serve to provide a blowing agent to the reaction mixture, resulting in a foamed structure, if such is desired.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : D 06 N 7/04

US CL : 428/151

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 428/151

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,005,035 A (DEAVER) 25 Jan. 1977, see whole document.	1-26

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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